

**Vikram Gadagkar, PhD**

Assistant Professor  
Department of Neuroscience  
Mortimer B. Zuckerman Mind Brain Behavior Institute  
Columbia University

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**Web:** <https://gadagkar.zuckermaninstitute.columbia.edu>

**EDUCATION AND TRAINING:**

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|-----------|---|---|
| 2013-2020 | Postdoc<br>(Neuroscience)               | Cornell University, USA<br>Topic: Neural Mechanisms of Performance Evaluation in Singing Birds<br>Adviser: Prof. Jesse H. Goldberg  |
| 2017      | Summer Course                           | Methods in Computational Neuroscience, Marine Biological Laboratory, Woods Hole, MA, USA<br>Course directors: Prof. Michale Fee & Prof. Mark Goldman  |
| 2006-2013 | Ph.D. (Physics)                         | Cornell University, USA<br>Thesis: Origin of the Inertial Anomaly in Solid Helium-4: Dislocation Dynamics versus Supersolidity<br>Adviser: Prof. J. C. Seamus Davis   |
| 2002-2005 | MS (Physics)                            | Indian Institute of Science, Bangalore, India<br>(Graduated with highest GPA)<br>Thesis: Ab Initio Restricted Hartree-Fock, High Pressure Raman, and Molecular Dynamics Studies on Carbon Nanotubes<br>Adviser: Prof. Ajay K. Sood, FRS |
| 1999-2002 | B.Sc. (Physics, Chemistry, Mathematics) | St. Joseph's College, Bangalore University, India<br>(First Class, 2 gold medals)   |

**POSITIONS:**

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| 2020-present | Assistant Professor, Department of Neuroscience and the Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University, USA |
| 2017-present | NIH K99/R00 Pathway to Independence Fellow  |
| 2018-2020    | Research Associate, Department of Neurobiology and Behavior, Cornell University, USA  |
| 2016-2020    | Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellow   |
| 2013-2020    | Visiting Scientist, Department of Physics, Cornell University, USA  |
| 2013-2018    | Postdoctoral Associate, Department of Neurobiology and Behavior, Cornell University, USA  |
| 2006-2013    | Graduate Research/Teaching Assistant, Department of Physics, Cornell University, USA  |
| 2005-2006    | Graduate Research Assistant, Department of Physics, Indian Institute of Science, Bangalore, India                                     |
| 1999-2004    | Kishore Vaigyanik Protsahan Yojana (KVPY) Fellow, Bangalore, India  |

**AWARDS, FELLOWSHIPS, AND HONORS:**

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| 34. Klingenstein-Simons Fellowship Award in Neuroscience   | 2023 |
| 33. McKnight Scholar Award   | 2023 |
| 32. Konishi Neuroethology Research Award - International Society for Neuroethology                     | 2023 |
| 31. NIH Director's New Innovator Award – DP2   | 2022 |
| 30. Searle Scholar Award   | 2021 |
| 29. American Association for the Advancement of Science AAAS/Science Program for Excellence in Science | 2019 |

28. Peter and Patricia Gruber International Research Award (Society for Neuroscience) 2018
27. K99/R00 Pathway to Independence Award (NIH/NINDS) 2017
26. Organization of Computational Neuroscience (OCNS) Award to attend the *Methods in Computational Neuroscience* course at the Marine Biological Laboratory at Woods Hole 2017
25. William Morton Wheeler Family Founders' Scholarship to attend the *Methods in Computational Neuroscience* course at the Marine Biological Laboratory at Woods Hole 2017
24. Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellowship 2016
23. Computational and Systems Neuroscience (COSYNE) Presenters Travel Award 2015
22. Douglas Fitch Memorial Travel Award, Department of Physics, Cornell University 2011
21. International Conference in Low Temperature Physics (LT26) Travel Award 2011
20. Cornell University Graduate School Conference Award 2011
19. Cornell Graduate Fellowship, Department of Physics, Cornell University 2006
18. Junior Research Fellowship (JRF) in the National Eligibility Test (NET), Government of India, declined. 2004
17. Kumari L. A. Meera Award for the highest CGPA in MS (Physical Sciences), Indian Institute of Science, Bangalore 2002-2003
16. Rhodes Scholarship Finalist 2002
15. Sri B. K. Srinivasa Iyengar Memorial Gold Medal in Mathematics and Chemistry, Bangalore University, India 2002
14. Shikshana Shilpi Shri P. Mallikarjunappa Memorial Gold Medal in Physical Chemistry, Bangalore University, India 2002
13. A. N. Sridhara Prize for the best all-around student in St. Joseph's College, Bangalore University, India 2002
12. Srinivasa Mastay Memorial Prize for Mathematics, St. Joseph's College, Bangalore University, India 2002
11. Phys. Sci. Assoc. Old Students' award for the most outstanding student, St. Joseph's College, Bangalore Univ., India 2002
10. Jaya Krishnan Prize for highest marks in all B.Sc. exams, St. Joseph's College, Bangalore University, India 2002
9. M. V. Jaganath Prize for highest marks in final B.Sc. exams, St. Joseph's College, Bangalore University, India 2002
8. Rev. Fr. Elias D'Souza S. J. Prize for Mathematics, St. Joseph's College, Bangalore University, India 2002
7. Prof. H. S. Srinivasa Rao Prize for highest marks in B.Sc. (PCM), St. Joseph's College, Bangalore University, India 2002
6. Certificate of Excellence in Lecture Competitions, St. Joseph's College, Bangalore University, India 2000
5. Awards in 9 science presentation contests and 14 science quizzes at the intercollegiate level in Bangalore, India 1999-2002
4. Kishore Vaigyanik Protsahan Yojana (KVPY) Fellowship, Govt. of India 1999-2004
3. Principal's Prize for highest marks in 1<sup>st</sup> year B.Sc. University Exam, St. Joseph's College, Bangalore Univ., India 2000
2. Special Prize for Academic Excellence in the All India Sec. School Exam of Central Board of Secondary Education 1997
1. Awarded the best all-around student in high school (KVIIISc) 1997

## PUBLICATIONS:

\*Co-first authors

#Co-corresponding authors

19. Dopaminergic error signals retune to social feedback during courtship  
A. Roeser\*, **Vikram Gadagkar**\*#, A. Das, P. A. Puzerey, B. Kardon and J. H. Goldberg#  
*Nature* (Cover Article) 623, 375-380 (2023)
18. Dopamine neurons evaluate natural fluctuations in performance quality  
A. Duffy, K. W. Latimer, J. H. Goldberg, A. L. Fairhall# and **Vikram Gadagkar**#  
*Cell Reports* 38, 110574 (2022)
17. Movement signaling in ventral pallidum and dopaminergic midbrain is gated by behavioral state in singing birds  
R. Chen, **Vikram Gadagkar**, A. C. Roeser, P. A. Puzerey and J. H. Goldberg  
*Journal of Neurophysiology* 125, 2219-2227 (2021)
16. How practice makes perfect: dopamine clues from a songbird  
**Vikram Gadagkar**  
*Simons Foundation Newsletter* (2017)

15. Dopamine Neurons Encode Performance Error in Singing Birds  
**Vikram Gadagkar**, P. A. Puzerey, R. Chen, E. Baird-Daniel, A. Farhang and J. H. Goldberg  
*Science* 354, 1278-1282 (2016)
14. A Variability-Generating Circuit Goes Awry in a Songbird Model of the FOXP2 Speech Disorder  
**Vikram Gadagkar** and J. H. Goldberg  
*Neuron* (Preview) 80, 1341-1344 (2013)
13. Generalized Rotational Susceptibility Studies of Solid <sup>4</sup>He  
**Vikram Gadagkar**, E. Pratt, B. Hunt, M. Yamashita, M. J. Graf, A. V. Balatsky, and J. C. Davis  
*Journal of Low Temperature Physics* 169, 180-196 (2012)
12. Interplay of Rotational, Relaxational, and Shear Dynamics of Solid <sup>4</sup>He  
E. Pratt\*, B. Hunt\*, **Vikram Gadagkar**, M. Yamashita, M. J. Graf, A. V. Balatsky, and J. C. Davis  
*Science* 332, 821-824 (2011)
11. Evidence for a Superglass State in Solid <sup>4</sup>He  
B. Hunt\*, E. Pratt\*, **Vikram Gadagkar**, M. Yamashita, A. V. Balatsky, and J. C. Davis  
*Science* 324, 632-636 (2009)
10. Irreversible pressure-induced transformation of boron nitride nanotubes  
S. Saha, **Vikram Gadagkar**, P. K. Maiti, D. V. S. Muthu, D. Golberg, C. Tang, C. Zhi, Y. Bando, and A. K. Sood  
*Journal of Nanoscience and Nanotechnology* 7(6), 1810-1814 (2007)
9. Double-walled carbon nanotubes under hydrostatic pressure: Raman experiments and simulations  
**Vikram Gadagkar**, S. Saha, D. V. S. Muthu, P. K. Maiti, Y. Lansac, A. Jagota, A. Moravsky, R. O. Loutfy, and A. K. Sood  
*Journal of Nanoscience and Nanotechnology* 7(6), 1753-1759 (2007)
8. Collapse of double-walled carbon nanotube bundles under hydrostatic pressure  
**Vikram Gadagkar**, P. K. Maiti, Y. Lansac, A. Jagota, and A. K. Sood  
*Physical Review B* 73, 085402 (2006)
7. High pressure Raman spectroscopy of double-walled carbon nanotubes  
**Vikram Gadagkar**, S. Saha, D. V. S. Muthu, P. Ramesh, H. Shinohara, R. O. Loutfy, and A. K. Sood  
*Proceedings of the 50th Department of Atomic Energy - Solid State Physics Symposium* (2005)
6. Strains induced in carbon nanotubes due to the presence of ions: *ab-initio* restricted Hartree-Fock calculations  
S. Ghosh, **Vikram Gadagkar**, and A. K. Sood  
*Chemical Physics Letters* 406, 10-14 (2005)
5. Faster development does not lead to correlated evolution of greater pre-adult competitive ability in *Drosophila melanogaster*  
M. Shakarad, N. G. Prasad, K. Gokhale, **Vikram Gadagkar**, M. Rajamani, and A. Joshi.  
*Biology Letters* 1, 91-94 (2005)
4. Communal courtship (?) in the Yellow Wattled Lapwing  
**Vikram Gadagkar**, L. Shyamal, N. V. Arakeri, M. Ramakrishnan, A. Kumar, and G. A. Uday Raghavan  
*Newsletter for Birdwatchers* 39(4), 66-67 (1999)
3. Little Grebe or Dabchick - a new sighting in the Indian Institute of Science campus, Bangalore  
**Vikram Gadagkar**, L. Shyamal, N. V. Arakeri, M. Ramakrishnan, and A. Lahiri  
*Newsletter for Birdwatchers* 39(4), 67 (1999)
2. Blue-throated Flycatcher, Indian Great Reed Warbler, Common Rosefinch and Lesser Golden-backed Woodpecker - four new species in the Indian Institute of Science campus, Bangalore  
**Vikram Gadagkar**, L. Shyamal, M. Ramakrishnan, N. V. Arakeri, S. Venkatesh, A. Lahiri, and A. Hariharan  
*Newsletter for Birdwatchers* 35(4), 69-70 (1995)
1. White-Browed Bulbul - A new sighting in the Indian Institute of Science campus, Bangalore  
**Vikram Gadagkar**, N. V. Arakeri, and M. Ramakrishnan  
*Newsletter for Birdwatchers* 34(4), 96 (1994)

**RESEARCH SUPPORT:**

8.	Klingenstein-Simons Fellowship Award in Neuroscience	2023-present
7.	McKnight Scholar Award	2023-present
6.	Konishi Neuroethology Research Award – International Society for Neuroethology	2023-2024
5.	NIH Director’s New Innovator Award – DP2	2022-present
4.	Searle Scholars Award	2021-2024
3.	Columbia University/Zuckerman Institute Startup Funds	2020-present
2.	K99/R00 (NIH/NINDS) Pathway to Independence Award	2017-2024
1.	Simons Collaboration on the Global Brain (SCGB) Postdoctoral Fellowship	2016-2017

**INVITED TALKS:**

66.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Ringberg Workshop on Birds and Wires, Max Planck Institute for Biological Intelligence, Germany.	2024
65.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> The Rockefeller University, New York, USA.	2024
64.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Searle Scholars Program Annual Meeting, Chicago, USA	2024
63.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Labroots 12 <sup>th</sup> Annual Neuroscience Event/NIH BRAIN Initiative	2024
62.	<i>Does Dopamine Guide Vocal Learning?</i> Faculty Talk, Zuckerman Institute, Columbia University, New York, USA.	2023
61.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.	2023
60.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Max Planck Institute of Animal Behavior and University of Konstanz, Konstanz, Germany.	2023
59.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> New York State Psychiatric Institute, Columbia University Irving Medical Center, New York, USA.	2023
58.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> University of Washington (supported by the HHMI Gilliam Fellowship), Seattle, USA.	2023
57.	<i>Dopamine neurons change their tuning according to courtship context in singing birds</i> University Seminar for the Integrative Study of Animal Behavior, Columbia University, New York, USA.	2023
56.	<i>Does Practice Make Perfect? How the Brain Learns Language in a Social World</i> Brain Insight Lecture, Stavros Niarchos Foundation & Zuckerman Institute, Columbia University, New York, USA.	2022
55.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.	2022
54.	<i>Dopaminergic Reward and Performance Error Signals are Gated During Courtship</i> Dopamine Meeting, Montreal, Canada.	2022
53.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> University of California, San Francisco, San Francisco, USA.	2022
52.	<i>Neural Mechanisms of Performance Evaluation in Singing Birds</i> Learning and Reasoning and Carbon and Silicon Seminar Series, Stanford University, Stanford, USA.	2022
51.	<i>Dopamine Neurons Evaluate Natural Fluctuations in Performance Quality</i> Gordon Research Conference – Basal Ganglia, Ventura, California, USA.	2022
50.	<i>Dopamine Neurons Evaluate Natural Fluctuations in Performance Quality</i> Virtual Songbird Satellite Meeting, USA.	2022

49. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021  
Princeton Neuroscience Institute, Princeton University, Princeton, USA.
48. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021  
Simons-Emory International Consortium on Motor Control, Columbia University, New York, USA.
47. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021  
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
46. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2021  
Kleinfeld Group, University of California, San Diego, USA.
45. *Dopamine neurons evaluate natural fluctuations in performance quality* 2021  
ViDA 2021: Virtual Dopamine Conference
44. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2020  
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
43. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Neurobiology and Behavior Graduate Student Bootcamp, Columbia University, New York, USA.
42. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Department of Physiology, Northwestern University, Chicago, USA.
41. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Department of Integrative Biology, University of Wisconsin-Madison, Madison, USA.
40. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Zuckerman Mind Brain Behavior Institute, Columbia University, New York, USA.
39. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Department of Psychology, University of Chicago, Chicago, USA.
38. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Department of Biological Sciences and the Neuroscience Institute, Carnegie Mellon University, Pittsburgh, USA.
37. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2019  
Department of Neuroscience, Yale University, New Haven, USA.
36. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2018  
School of Molecular and Cellular Biology, University of Illinois at Urbana-Champaign, USA.
35. *Neural Mechanisms of Performance Evaluation in Singing Birds* 2018  
Department of Psychology, Hunter College, The City University of New York, New York, USA.
34. *Dopamine Neurons Encode Performance Error in Singing Birds* 2017  
Zuckerman Institute, Columbia University, New York, USA.
33. *Dopamine Neurons Encode Performance Quality Relative to Recent Practice in Singing Birds* 2017  
Simons Collaboration on the Global Brain (SCGB) NY-Area Postdoc Meeting, New York, USA.
32. *Dopamine Neurons Encode Performance Error in Singing Birds* 2017  
SPiNES: Seminars from Post-docs in Neuroscience: Extramural Series, New York University, New York, USA.
31. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016  
Birdsong 6 – Integrating neural, social, and evolutionary influences on communication, San Diego, USA.
30. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016  
University of Washington, Seattle, USA.
29. *Dopamine Neurons Encode Performance Error in Singing Birds* 2016  
Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.
28. *How Does Practice Make You Perfect? Clues from a Songbird* 2016  
Cornell Undergraduate Society for Neuroscience (CUSN), Cornell University, Ithaca, USA.
27. *Dopamine neurons encode performance quality relative to recent practice in singing birds* 2016  
Neurobiology and Behavior Graduate Student Symposium, Cornell University, Ithaca, USA
26. *Dopamine Neurons Encode Performance Error in Singing Birds* 2015  
Lewis-Sigler Institute for Integrative Genomics, Princeton University, Princeton, USA.

25. *How is Trial and Error Learning Implemented in the Brain?* 2015  
J. C. Séamus Davis Group Meeting, Department of Physics, Cornell University, Ithaca, USA
24. *Dopamine neurons encode performance error in singing birds* 2015  
Neurobiology and Behavior Graduate Student Symposium, Cornell University, Ithaca, USA
23. *Zebra finch ventral tegmental area neurons encode song prediction error* 2015  
COSYNE 2015: Computational and Systems Neuroscience, Salt Lake City, USA
22. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014  
Centre de Neurophysique, Physiologie et Pathologie, University of Paris Descartes, Paris, France
21. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014  
Institute of Neuroinformatics, University of Zurich/ETH, Zurich, Switzerland
20. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014  
Bernstein Center for Computational Neuroscience, Humboldt University, Berlin, Germany
19. *Neural Mechanisms of Trial and Error Learning* 2014  
Biomedical Engineering Society Retreat, Cornell University, Ithaca, USA
18. *If Zebra Finches Learn Their Song Through Trial and Error, Where is the Error Signal?* 2014  
Research Design in the Study of Animal Social Behavior, Department of Neurobiology and Behavior, Cornell University, Ithaca, USA
17. *How Practice Makes You Perfect: Reverse Engineering the Zebra Finch Brain* 2013  
Cornell Electron Devices Society, Cornell University, Ithaca, USA
16. *In Search of ‘Actor’ and ‘Critic’ Neurons in the Zebra Finch Song Circuit* 2013  
National Centre for Biological Sciences, Bangalore, India
15. *How does Practice Make you Perfect? Insights from the Songbird Brain* 2013  
St. Joseph’s College, Bangalore, India
14. *Supersolid or a Network of Defects? The Tortuous Story of Solid Helium* 2013  
Department of Physics, Indian Institute of Science, Bangalore, India
13. *In Search of ‘Actor’ and ‘Critic’ Neurons in the Zebra Finch Song Circuit* 2013  
Centre for Neuroscience, Indian Institute of Science, Bangalore, India
12. *In Search of ‘Actor’ and ‘Critic’ Neurons in the Zebra Finch Song Circuit* 2013  
Research Design in the Study of Animal Social Behavior, Department of Neurobiology and Behavior, Cornell University, Ithaca, USA
11. *Supersolid or a Network of Defects? The Tortuous Story of Solid Helium* 2013  
Cornell Electron Devices Society, Cornell University, Ithaca, USA
10. *‘Supersolid’ He-4: A New State of Matter?* 2009  
Jawaharlal Nehru Center for Advanced Scientific Research, Bangalore, India
9. *‘Supersolid’ He-4: A New State of Matter?* 2009  
Department of Physics, Indian Institute of Science, Bangalore, India
8. *Evidence for a superglass state in solid He-4* 2009  
Pizza Talk Summer Series, Department of Physics, Cornell University, Ithaca, USA
7. *‘Supersolid’ He-4: A New State of Matter?* 2008  
Cornell Electron Devices Society, Cornell University, Ithaca, USA
6. *Collapse of double-walled carbon nanotube bundles under hydrostatic pressure* 2008  
Pizza Talk Summer Series, Department of Physics, Cornell University, Ithaca, USA
5. *Collapse of double-walled carbon nanotube bundles under hydrostatic pressure* 2007  
McEuen Group, Department of Physics, Cornell University, Ithaca, USA
4. *Fractals - Truth and Beauty* 2004  
Part of the “Special aspects of Classical Mechanics” series, Department of Physics, Bangalore University, India
3. *Natural Selection* 2001  
Kendriya Vidyalaya, Indian Institute of Science, Bangalore, India

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| 2. | <i>Evolution by Natural Selection - Darwin and Beyond</i><br>Bharathi Junior College, Mandya, India                            | 1998 |
| 1. | <i>Evolution by Natural Selection - Darwin and Beyond</i><br>Kendriya Vidyalaya, Indian Institute of Science, Bangalore, India | 1997 |

**POSTER PRESENTATIONS:**

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| 15. | <i>Neural Mechanisms of Performance Evaluation in Singing Birds</i><br>Klingenstein-Simons Fellowship Award in Neuroscience Annual Meeting, New York, USA.                          | 2024 |
| 14. | <i>Evaluating the Actions of Others: Neural Mechanisms of Mate Choice in Female Songbirds</i><br>Searle Scholars Program Annual Meeting, Chicago, USA.                              | 2023 |
| 13. | <i>Dopaminergic Reward and Performance Error Signals are Gated During Courtship</i><br>Gordon Research Conference – Neural Mechanisms of Acoustic Communication, Mount Holyoke, USA | 2022 |
| 12. | <i>Dopaminergic Reward and Performance Error Signals are Gated During Courtship</i><br>Dopamine Meeting, Montreal, Canada.  | 2022 |
| 11. | <i>Evaluating the Actions of Others: Neural Mechanisms of Mate Choice in Female Songbirds</i><br>Searle Scholars Program Annual Meeting, Chicago, USA.                              | 2022 |
| 10. | <i>Neural Mechanisms of Performance Evaluation in Singing Birds</i><br>Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.                               | 2022 |
| 9.  | <i>Dopamine neurons evaluate natural fluctuations in performance quality</i><br>SfN 2021: Society for Neuroscience Meeting, Chicago, USA  | 2021 |
| 8.  | <i>Social context-dependent modulation of dopaminergic performance error</i><br>SfN 2018: Society for Neuroscience Meeting, San Diego, USA  | 2018 |
| 7.  | <i>Social context-dependent modulation of dopaminergic performance error</i><br>Birdsong 8: Out on a Limb, San Diego, USA   | 2018 |
| 6.  | <i>Social context-dependent modulation of dopaminergic performance error</i><br>Bird Song and Animal Communication Annual Meeting, Millbrook, New York, USA                         | 2018 |
| 5.  | <i>Social context-dependent modulation of dopaminergic performance error</i><br>Simons Collaboration on the Global Brain (SCGB) Annual Meeting, New York, USA.                      | 2018 |
| 4.  | <i>Dopamine neurons encode performance error in singing birds</i><br>SfN 2016: Society for Neuroscience Meeting, San Diego, USA.  | 2016 |
| 3.  | <i>Interplay of Rotational, Relaxational, and Shear Dynamics of Solid <sup>4</sup>He</i><br>LT26: International Conference on Low-Temperature Physics, Beijing, China               | 2011 |
| 2.  | <i>Unifying the Rotational, Relaxational, and Shear Dynamics of Solid <sup>4</sup>He</i><br>QFS2010: International Symposium on Quantum Fluids and Solids, Grenoble, France         | 2010 |
| 1.  | <i>High pressure Raman spectroscopy of double-walled carbon nanotubes</i><br>50th Department of Atomic Energy Solid State Physics Symposium, Mumbai, India                          | 2005 |

**WORKSHOPS AND SCHOOLS:**

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|-----|---|-----------|
| 11. | Faculty Mentor Bystander Intervention Training, Columbia University, USA  | 2024      |
| 10. | <i>Crawford Bias Reduction Theory &amp; Training (CRBT) – Targeted Lab/Team Intervention</i> , Zuckerman Institute, Columbia University, USA              | 2022-2023 |
| 9.  | <i>Center for the Improvement of Mentored Experiences in Research (CIMER) Mentor Training for PIs</i> , Zuckerman Institute, Columbia University, USA     | 2022      |
| 8.  | <i>Crawford Bias Reduction Theory &amp; Training (CRBT)</i> , Zuckerman Institute, Columbia University, USA   | 2021-2022 |
| 7.  | <i>The PI Crash Course: Skills for Future or New Lab Leaders</i> , Columbia University, USA   | 2020      |
| 6.  | <i>Methods in Computational Neuroscience</i> , Marine Biological Laboratory, Woods Hole, MA, USA  | 2017      |
| 5.  | <i>Kodai Summer School in Quantum Mechanics, Statistical Mechanics and Non-Linear Dynamics</i> , Indian Institute of Astrophysics (IIA), Bangalore, India | 2003      |
| 4.  | 100-hour workshop in <i>Space Sciences</i> conducted by St. Joseph's College, Bangalore University, India   | 2002      |
| 3.  | 100-hour workshop in <i>Reaction Mechanisms</i> , St. Joseph's College, Bangalore University, India   | 2001      |

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| 2. | 100-hour workshop in <i>Spectroscopy</i> , St. Joseph's College, Bangalore University, India               | 2000 |
| 1. | 100-hour workshop on <i>Human Resource Development</i> , St. Joseph's College, Bangalore University, India | 2000 |

**LEADERSHIP AND SERVICE:****Conferences and Meetings:**

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| 6. | <i>Upcoming</i> : Co-Chair (elected), Gordon Research Conference – Neural Mechanisms of Acoustic Communication | 2026         |
| 5. | Discussion Leader, Gordon Research Conference – Neural Mechanisms of Acoustic Communication                    | 2024         |
| 4. | Co-Vice Chair (elected), Gordon Research Conference – Neural Mechanisms of Acoustic Communication              | 2024         |
| 3. | Organizing Member, Zuckerman Institute Gender Inclusion Group (ZIGI)   | 2021-present |
| 2. | Conference session moderator, Virtual Dopamine (ViDA) Conference: The Future of Dopamine                       | 2020         |
| 1. | Co-organized a NeuroDinner event for the Program in Neuroscience, Cornell University                           | 2014         |

**Selection Committees:**

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| 6. | Neurobiology and Behavior Graduate Program, Columbia University                                | 2023-2024   |
| 5. | Zuckerman Institute Postdoc Fellows Program, Zuckerman Institute, Columbia University          | 2023        |
| 4. | Faculty Search Committee, Zuckerman Institute, Columbia University                             | 2021        |
| 3. | Artist Selection Committee, Art in the Education Lab, Zuckerman Institute, Columbia University | 2021 & 2022 |
| 2. | Interviewer for Doctoral Program in Neurobiology and Behavior, Columbia University             | 2021 & 2022 |
| 1. | Colloquium committee: Department of Physics, Cornell University                                | 2008        |

**Peer Review:**

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| 7. | Member, NIH Neurobiology of Motivated Behavior Study Section                                       | 2023        |
| 6. | Member, NIH/NINDS Special Emphasis Panel on Music and Health                                       | 2022        |
| 5. | Reviewer, Columbia University's Research Initiatives in Science and Engineering (RISE) Competition | 2020-2021   |
| 4. | Abstract Reviewer, Computational and Systems Neuroscience (Cosyne)                                 | 2017        |
| 3. | Review Panelist, National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP)     | 2016        |
| 2. | Reviewed honors thesis for Biological Sciences Honors Program, Cornell University                  | 2015 & 2016 |
| 1. | Reviewed grant proposals for Sigma Xi Cornell University Chapter                                   | 2015 & 2016 |

**Journal Review:***Current Biology**Proceedings of the National Academy of Sciences (PNAS)**Progress in Neurobiology***Panelist:**

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| 4. | STEMPeers panel on Early Career Research in Academia: Know What to Expect, Philadelphia, USA   | 2022        |
| 3. | Postdoc-Faculty Coffee Chat, Zuckerman Institute, Columbia University, USA   | 2021        |
| 2. | Panelist for Columbia Access Neuroscience (CAN) – a program for students from underrepresented backgrounds in neuroscience, Columbia University, USA | 2021 & 2022 |
| 1. | Panelist for the Yale Neuroscience Career Panel, Department of Neuroscience, Yale University, USA  | 2021        |

**PhD Thesis Committee:**

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|----|---|------|
| 4. | Ryan Schwark (Abdus-Saboob lab), Zuckerman Institute, Columbia University | 2024 |
|----|---|------|

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|----|---|--------------|
| 3. | Ching Fang (Abbott & Aronov labs), Zuckerman Institute, Columbia University | 2023-present |
| 2. | John Lindsey (Litwin-Kumar lab), Zuckerman Institute, Columbia University   | 2022-2024    |
| 1. | Yow-Tyng Yeh (Woolley lab), Zuckerman Institute, Columbia University        | 2021-present |

**PhD Qualifying Exam Committee:**

- |    |   |      |
|----|---|------|
| 3. | Ishani Ganguly (Behnia and Abbott Labs), Zuckerman Institute, Columbia University | 2022 |
| 2. | John Lindsey (Litwin-Kumar lab), Zuckerman Institute, Columbia University         | 2021 |
| 1. | Ching Fang (Abbott & Aronov labs), Zuckerman Institute, Columbia University       | 2021 |

**External PhD Thesis Committee:**

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|----|--|--------------|
| 1. | Xueqian Ma (Hahnloser lab), ETH Zurich | 2024-present |
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**MEMBERSHIPS:**

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|----|--|----------------|
| 7. | International Society for Neuroethology                    | 2023 - present |
| 6. | Society for Social Neuroscience                            | 2023 - present |
| 5. | Dopamine Society, Founding Member                          | 2022 - present |
| 4. | American Association for the Advancement of Science (AAAS) | 2019 - present |
| 3. | Sigma Xi, The Scientific Research Society                  | 2018 - present |
| 2. | Organization for Computational Neurosciences (OCNS)        | 2018 - present |
| 1. | Society for Neuroscience (SfN)                             | 2015 - present |

**TEACHING AND MENTORING:****Courses:**

- |     |  |           |
|-----|--|-----------|
| 13. | UN3005 Neurobio II: Devpt & Systems, Columbia University (Guest Lecture on Reinforcement Learning in Songbirds)  | 2023-2024 |
| 12. | BMSC-GA-4463: Readings in Neuroscience, New York University (Guest Faculty)  | 2022      |
| 11. | MUSI AV4000 – <i>Music, Math, and Mind</i> , Columbia University (Guest Lecture on How Practice Makes Perfect – Dopamine Clues from a Songbird)                            | 2022-2023 |
| 10. | E3B GR6450 – <i>Ethology and the Evolution of Behavior</i> , Columbia University (Guest Lecture on Song Learning and Dopamine)   | 2021-2022 |
| 9.  | PS 521/NE 521 – <i>Animal Models in Behavioral Neuroscience</i> , Boston University (Guest Faculty)  | 2020      |
| 8.  | Academic Application Boot Camp, Columbia University (Lecture on How to Write an Effective Research Statement and Session on Research Statement Live Q&A)                   | 2020      |
| 7.  | NB&B GR6055 – <i>Survey Neuroscience II</i> , Columbia University (Lecture on Motor Performance in Songbirds)  | 2020-2024 |
| 6.  | BIONB 2220 – <i>Introduction to Neuroscience</i> , Department of Neurobiology and Behavior, Cornell University (Guest Lecture on Basal Ganglia and Reinforcement Learning) | 2016      |
| 5.  | PHYS 1101 – <i>General Physics I</i> , Department of Physics, Cornell University (Teaching Assistant)  | 2012      |
| 4.  | PHYS 1117 – <i>Concepts of Modern Physics</i> , Department of Physics, Cornell University (Grader)   | 2008      |
| 3.  | PHYS 208 – <i>Fundamentals of Physics II</i> , Department of Physics, Cornell University (Teaching Assistant)  | 2008      |
| 2.  | PHYS 101/102 – <i>General Physics I/II</i> , Department of Physics, Cornell University (Teaching Assistant)  | 2007      |
| 1.  | PHYS 208 – <i>Fundamentals of Physics II</i> , Department of Physics, Cornell University (Teaching Assistant)  | 2007      |

**Graduate Students:**

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|----|---|--------------|
| 4. | Nathan Nadler, Zuckerman Institute, Columbia University   | 2023-present |
| 3. | Jessica Burke, Zuckerman Institute, Columbia University   | 2022-present |
| 2. | Hannah Chen, Zuckerman Institute, Columbia University     | 2021-present |
| 1. | Jonathan Kasdin, Zuckerman Institute, Columbia University | 2020-present |

**Postbacs:**

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|----|--|--------------|
| 4. | Malavika Eswaran, Zuckerman Institute, Columbia University | 2023-present |
| 3. | Amanuel Sahilu, Zuckerman Institute, Columbia University   | 2022-present |
| 2. | Arnav Raha, Zuckerman Institute, Columbia University       | 2021-2023    |
| 1. | Jessica Burke, Zuckerman Institute, Columbia University    | 2020-2021    |

**Undergraduate Students:**

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|-----|---|--------------|
| 10. | Kayla Davis, Zuckerman Institute, Columbia University ( <a href="#">Leadership Alliance Program</a> ) | 2023         |
| 9.  | D’Juan Moreland, Zuckerman Institute, Columbia University ( <a href="#">NIH U-RISE Program</a> )      | 2023         |
| 8.  | Aditi Borde, Zuckerman Institute, Columbia University   | 2023-present |
| 7.  | Malavika Ramarao, Department of Neurobiology and Behavior, Cornell University                         | 2019-2020    |
| 6.  | Archana Podury, Department of Neurobiology and Behavior, Cornell University                           | 2016-2018    |
| 5.  | Alexander Farhang, Department of Neurobiology and Behavior, Cornell University                        | 2014-2015    |
| 4.  | Eliza Baird-Daniel, Department of Neurobiology and Behavior, Cornell University                       | 2013-2015    |
| 3.  | Praveen Narayanan, Department of Physics, Cornell University  | 2011         |
| 2.  | Neal Harrington, Department of Physics, Cornell University  | 2011         |
| 1.  | James McArdle, Department of Physics, Cornell University  | 2011         |

**High School Students:**

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|----|---|-----------|
| 1. | Aminata Diallo, Zuckerman Institute, Columbia University ( <a href="#">BRAINYAC Program</a> ) | 2023-2024 |
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**Visiting Students:**

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|----|--|------|
| 1. | Xueqian Ma, ETH Zurich (Hahnloser Lab) | 2023 |
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**OUTREACH/PODCASTS/INTERVIEWS:**

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|-----|---|------|
| 17. | Lab tour for Columbia Access Neuroscience (CAN) – a program for students from underrepresented backgrounds in neuroscience, Columbia University, USA  | 2024 |
| 16. | Jazz Meets Neuroscience with Terri Lyne Carrington, Zuckerman Institute, Columbia University, New York, USA   | 2024 |
| 15. | The Song and Dance of Neurons – Science Talk and Interpretive Dance with neuroscientist and dancer Sloka Iyengar for STEMPeers, Philadelphia, USA   | 2022 |
| 14. | <a href="#">Jazz Listening Party with Miguel Zenon – Instrumental Mastery and Neuroscience</a> , Zuckerman Institute, Columbia University, New York, USA  | 2021 |
| 13. | <a href="#">Sound Waves and Brain Waves: Birdbrains and Love Songs</a> – episode with Jazz Artist in Residence Miguel Zenon, Zuckerman Institute, Columbia University and Northern Manhattan Arts Alliance (NoMAA), New York, USA | 2021 |
| 12. | <a href="#">Scientific Sense Podcast with Gill Eapen</a>  | 2021 |
| 11. | Featured in <i>Journey of the Early Career Scientist</i> – hosted by the Mortimer B. Zuckerman Mind Brain Behavior Institute, Columbia University, New York, USA  | 2020 |
| 10. | Selected to speak at the inaugural SPARK talks - Scholars Present About Research and Knowledge, on <i>How does practice make you perfect? Clues from a songbird</i> , Cornell University Library, Cornell University, Ithaca, USA | 2015 |
| 9.  | Co-organized a workshop <i>Play or get played: game theoretic ideas in animal behavior</i> for Expanding Your Horizons: Motivating Young Women in Science+Mathematics, Cornell University, Ithaca, USA                            | 2015 |
| 8.  | Co-organized a series of popular science lectures for students and the public through Looking Around: Students' Group for Interdisciplinary Interactions, Indian Institute of Science, Bangalore, India                           | 2005 |
| 7.  | Conducted a city-wide science quiz for undergraduates at St. Joseph's College, Bangalore University, Bangalore, India   | 2004 |
| 6.  | Conducted a science quiz for students awarded the National Science Fellowship (KVPY) at the Indian Institute of Science, Bangalore, India   | 2004 |

5. Conducted a science quiz for students awarded the National Science Fellowship (KVPY) at the Indian Institute of Science, Bangalore, India 2003
4. Conducted the 13<sup>th</sup> annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India 2002
3. Conducted the 12<sup>th</sup> annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India 2001
2. Conducted the 11<sup>th</sup> annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India 2000
1. Conducted the 10<sup>th</sup> annual Smt. Mrudula Vaidya City Wide Science Quizzes for high school students at the Indian Institute of Science, Bangalore, India 1999